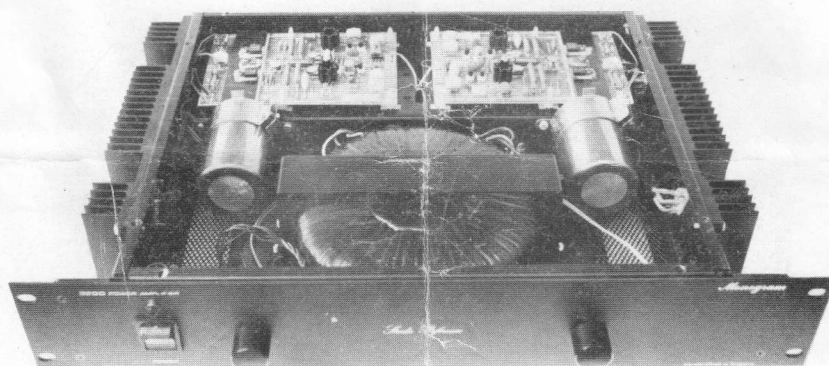
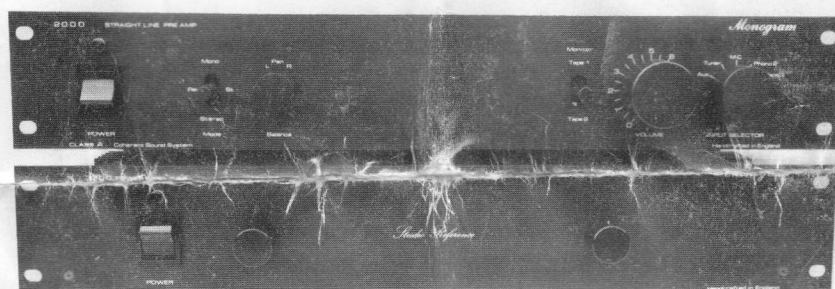
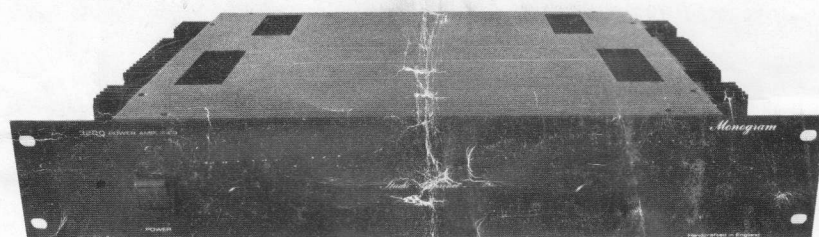


PRECISION AUDIO COMPONENTS



MONOGRAM

3100

POWER AMPLIFIERS

3200

The **MONOGRAM 3100 and 3200** represent a three year intensive design effort to produce solid state power amplifiers producing a smooth **VALVE SOUND** without the tiring clinical sound associated with current transistor designs. The major breakthrough is achieved using a revolutionary enriched Class A design incorporating a new dual heat sink design.

THERMAL TRACKING a major new development allows the amplifier to operate in pure **CLASS A** for 90% of all normal operating conditions producing a superb smooth **COHERENT SOUND** but in addition allows precise tracking of all thermal conditions of the main output driving transistors. Using this totally new design **MONOGRAM** amplifiers exhibit inherently smooth transition into the main output drive circuitry which accounts for the valve sound now associated with all our amplifiers.

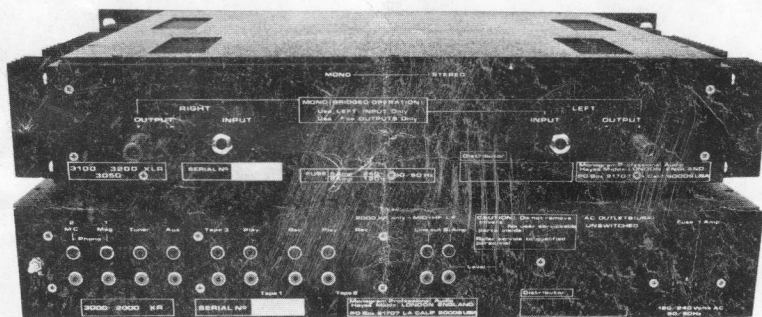
POWER SUPPLIES now incorporated into all **MONOGRAM** amplifiers are now rated at 450 & 650VA which is more than twice the normal rated requirement for each of the amplifiers. Using such massive power supplies produces staggeringly realistic **BASS TRANSIENTS** never before achieved on a power amplifier at these ratings. **TORROID TRANSFORMERS ARE USED EXCLUSIVELY.**

QUALITY & FINISH on all **MONOGRAM** amplifiers were recently described by independent revue as the finest quality and finish ever achieved by a **BRITISH** company and congratulates the Company on their attention to detail both in producing a superb new and exciting product and one which produces excellent sound characteristics.

TECHNICAL SPECIFICATIONS

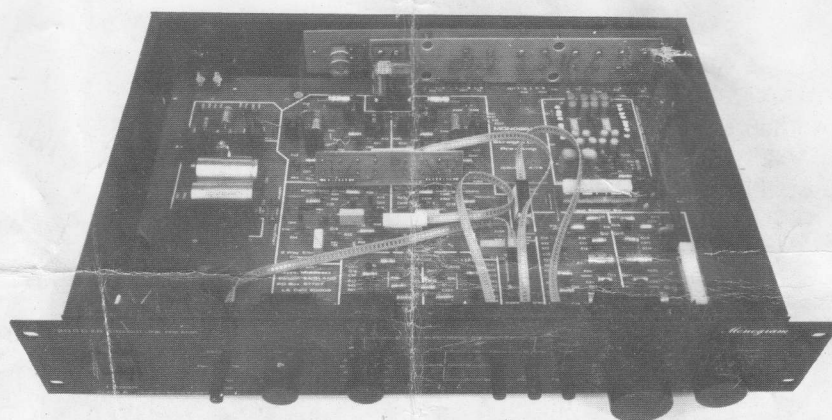
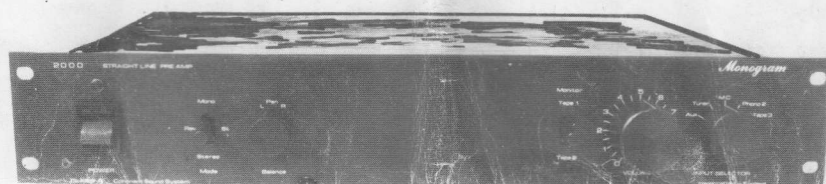
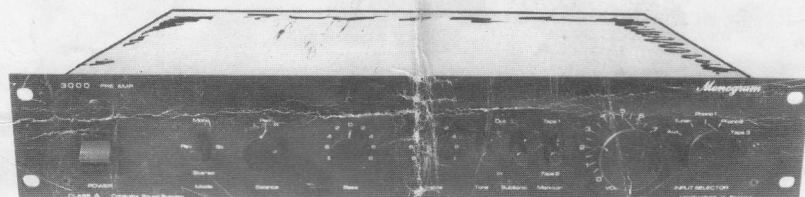
Power Output	3100	105 Watts R, M, S, continuous per channel 20Hz - 20kHz both channels driven 8 ohms.
	3200	155 Watt R, M, S, continuous per channel 20Hz - 20kHz both channels driven 8 ohms.
Frequency Response		10Hz - 22kHz - 0,2dB.
Power Bandwidth		10Hz - 30kHz - 2dB.
Harmonic Distortion		Less than 0,06% from 0,1 Watt to 200 Watts R, M, S, 20Hz - 20kHz - 8 ohms.
Intermodulation Distortion		Less than 0,04% from 0,1 Watt to 200 Watts R, M, S, 20Hz - 20kHz - 8 ohms.
Damping factor		>400 to 1kHz - 8 ohms.
Hum and Noise		115dB below rated output.
Power Supply	3100	Torroid, Rating Transients 450VA.
	3200	Torroid, Rating Transients 650VA.
Input Impedance		22K at min. level, 15K at max. level.

Sensitivity		0,775 R,M,S, 0dB/1,5 volt max. Internally Adjustable
Stability		Unconditionally stable with any load or source impedance.
Protection		VI Limiters, D. C. Supply fuses. AC line fuses
Power Requirement		120V/240V 50/60Hz A.C. only
Connectors		Std, 6,35 mm (1/4") Jacks.
Controls		Level (each channel).
Electronic Design		Pure Class A at 1 amp class AB at 1 amp - 5 amps.
Dimensions (overall)		3 1/2" high x 19" wide x 13" deep (std). 19" (rack mounting).
Weight	3100	30lbs
	3200	35lbs



As part of our commitment to product excellence, Monogram Professional Audio routinely introduces design refinements or improved materials or production methods into existing products. Monogram Professional Audio reserve the right to alter specifications without notice.

PRECISION AUDIO COMPONENTS



MONOGRAM

2000

PRE AMPLIFIERS

3000

The heart of any high quality sound system is the Pre-Amplifier or control system console. The new **MONOGRAM** Pre-amps represent three years of dedicated research and development into producing a "COHERENT SOUND" with the inherent smoothness of a valve amplifier. This objective was achieved using some startlingly new design techniques never before achieved in a transistor designed Pre-amp. The principle design features of **MONOGRAM** Pre-amps have always been developed using real people with ears rather than Real Time Computers which cannot distinguish between a good sound and a bad sound.

The **MONOGRAM 2000** — **2000XR** and **3000** Pre-amps cater to the **PURIST** the **ESOTERIC PURIST** and the **PERFECTIONIST**. All 3 Pre-amps are electronically similar but offer those facilities most requested by our listeners, each of whom have slightly differing design ideas. We are confident that following a listening test you will readily appreciate some of the marvellous new ideas and innovations now available in all the new **MONOGRAM** Pre-amps.

MOVING COIL PRE-AMP (HEAD AMP) 2000 Series. Great care is necessary in the design of Moving Coil Head Amps to ensure ultra low noise levels to cater for the tiny voltages generated by the moving coil cartridge. In order to achieve this objective a total of 16 specially selected and matched low noise transistors, 16 Electrolytic capacitors for decoupling and 32 Precision **THICK FILM** resistor networks were required together with a totally independent power supply system from the pre-amp to accomplish this task and to ensure the beauty and delicate musical information is not lost through noise. Detailed listening tests with many different cartridges showed the design to be able to match all those tested. The inbuilt mini loading modules also allow custom tailoring to suit the listener's individual taste.

SUBSONIC FILTER 3000 only. A 3rd order **BUTTERWORTH** active filter network is employed to eliminate virtually all subsonic noise without interfering with the **BASS** response so often destroyed by using a passive filter employed in 90% of all other pre-amps.

TONE CONTROLS. 3000 only. Most audiophiles do not use tone controls since they can seriously mar the original musical information. The **MONOGRAM 3000** incorporates a superb new design employing techniques by **BAXENDALL** but employ frequencies outside the mid-range at 80Hz and 10 KHz which we are confident will balance the sound only related to room acoustics, and decor where the system is located preserving all the original musical information.

LINE AMPLIFIER CLASS "A" 600 Ohms. (Optional) Most pre-amp designs have very weak power supplies and cannot extract all the subtle Bass information at low frequencies, due to low current capability. **MONOGRAM** employs a high power **CLASS A** design capable of **2 Amp transient** levels at 600 Ohms, this enables the system to drive long cables without loss of HF information.

POWER SUPPLY. The most important part of the Pre-amp design is its power supply. Many excellent designs are seriously affected by poor current capability especially at bass frequencies where much of the delicacy and warmth is contained. **MONOGRAM** employ a regulated control system that is capable of **2 AMPS** which is more than 20 times its normal operating condition. The moving coil amplifier has its own independant regulated power supply.

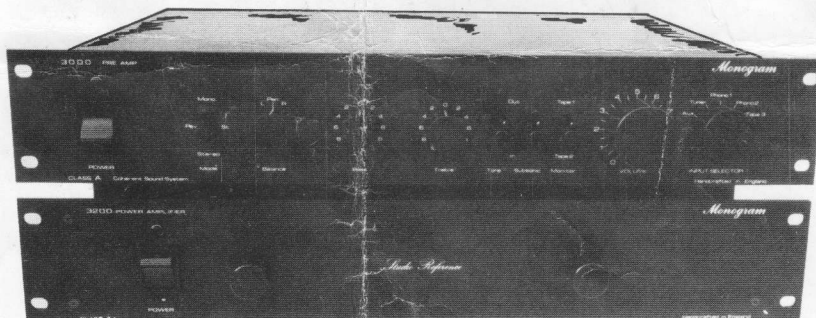
SPECIFICATIONS

Phono. 3mV & 1 kHz. RIAA $\pm 0.25\%$. Gain 39dB. Noise $-87\text{dB}/10\text{mV}$. THD 0.006%.

Tone Controls. Bass $\pm 18\text{dB}/80\text{Hz}$. Treble $\pm 15\text{dB}/10\text{kHz}$. THD 0.004%. Noise -105dB .

Tuner/Aux/Tape. 250 mV & 15k imp. Tape 250mV & 5.6k imp. Noise -105dB . THD 0.008%

Power Req'd. 120/240v AC 50/60Hz. Size 19" x 12 " x 3 1/2". Weight 12 lbs.

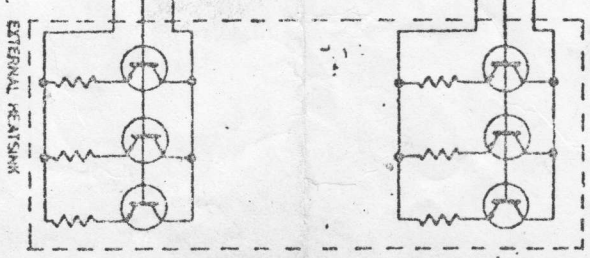
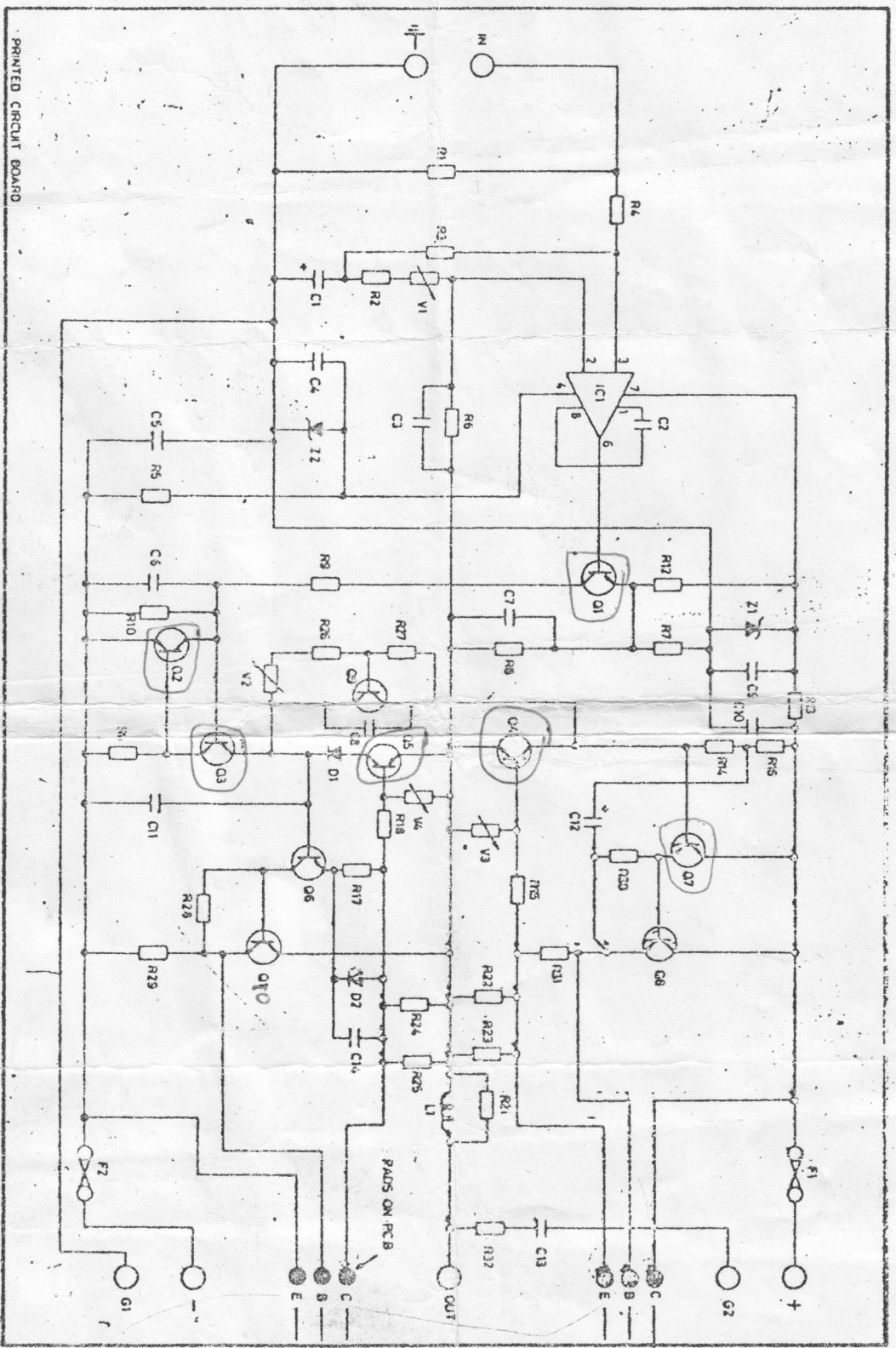


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MONOGRAM PROFESSIONAL AUDIO 281 Balmoral Drive Hayes Middlesex London ENGLAND
Telephone 01- 573 1566

3000

3100



SEE RESPECTIVE PARTS LIST FOR COMPONENT DETAILS

142
1-3
YIN 4
01P
5-B
+
8V+

POWER AMPLIFIER DRIVE CARD

DESCRIPTION	QTY. PER.	COMPONENTS LOCATION NO.
INTEGRATED CCT	1C1	1C1, 748.
TRANSISTORS	2	Q1, Q5 MPS A56
	2	Q4, Q8 MPS A06
	2	Q3, Q3 2N 3440
	1	Q6, BFT 19
	1	Q9, BD 135
	2	Q8, Q10, TIP 47
CAPACITORS	1	C1, 100 μ F 10V
	1	C12, 4.7 μ F 63V
	7	C4, 5, 8, 9, 10, 13, 14 0.1 μ F
	1	C6 1000 pF
	1	C11 270 pF
	1	C3 120 pF
	1	C7 47 pF
	1	C2 22 pF
PRE-SET POTS	4	V1, 2, 3, 4, 470 Ω
RESISTORS	2	R29, 31 5.6 Ω
	1	R32, 8.2 Ω
	2	R17, R21 22 Ω
	1	R16 75 Ω
	2	R28, R30, 150 Ω
	2	R15, R18, 180 Ω
	2	R2, R26, 220 Ω
	1	R10, 1.0K
	3	R4, R9, R27, 1.5K
	3	R5, R7, R13, 3.9K
	2	R14, R16, 6.8K
	2	R6, R12, 18K
	3	R1, R3, R8, 47K
DIODES	1	D1, 1N4148 , 1N4148
ZENER DIODES	2	Z1, Z2, BZX 83 C15
FUSES	2	F1, F2, 8 Ω -3A / 4 Ω -4+5A
WIREWOUND RESISTORS	2	R22, R23, R24, R25, 0.22 Ω 5 WATT
	4	8 Ω x 2 4 Ω x 4

